

# House Select Committee on Strategic Transportation Planning and Long Term Funding Solutions

Innovation and Revenue Reform

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# What are the Challenges?

# National Trends...

## Population Increase

2015: **320 million people**  
2045: **390 million people**

In 30 years our population is expected to grow by about

**70 million**

... that's more than the current populations of



## Bumper-to-Bumper

On average, we spend

over **40**  hours

stuck in traffic each year

The annual financial cost of congestion is

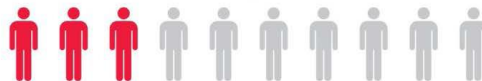
**\$121 billion** 



## Older Americans — Redefining Longevity

By 2045, the number of Americans over age 65 will increase by

**77%**



About **one-third of people over 65** have a disability that limits mobility. Their access to critical services will be more important than ever.

## Millennials — Shaped by Technology

There are **73 million Millennials** aged 18 to 34. They are the first to have access to the internet during their formative years and will be an important engine of our future economy.

Millennials are driving less. By the end of the 2000s, they drove over **20% fewer** miles than at the start of the decade.



## Income Inequality

**10%** of the population takes home **one-third** of our national income.

Transportation is the **second-largest** expense for U.S. households.



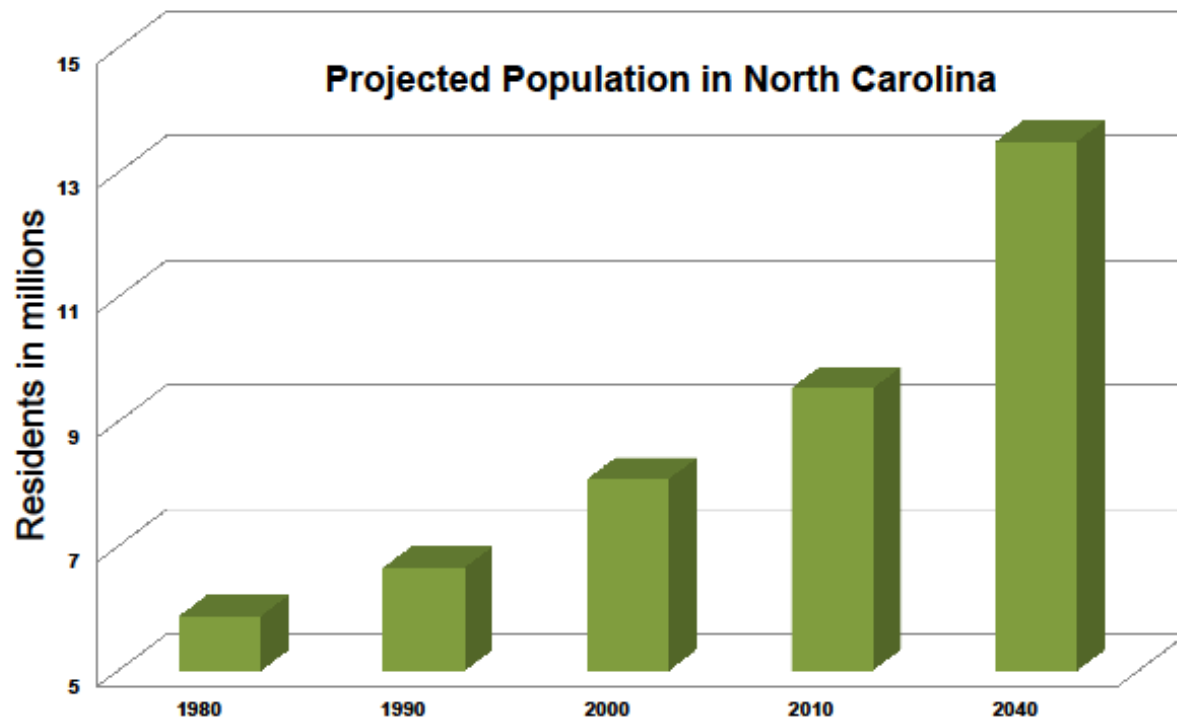
## Megaregions and Shifts in Population Centers

**11** megaregions are linked by transportation, economics, and other factors.

They represent over **75%** of our population and employment.

In 2014, **365,000** people moved to the South—up **25%** from 2013—and moves to the West doubled.

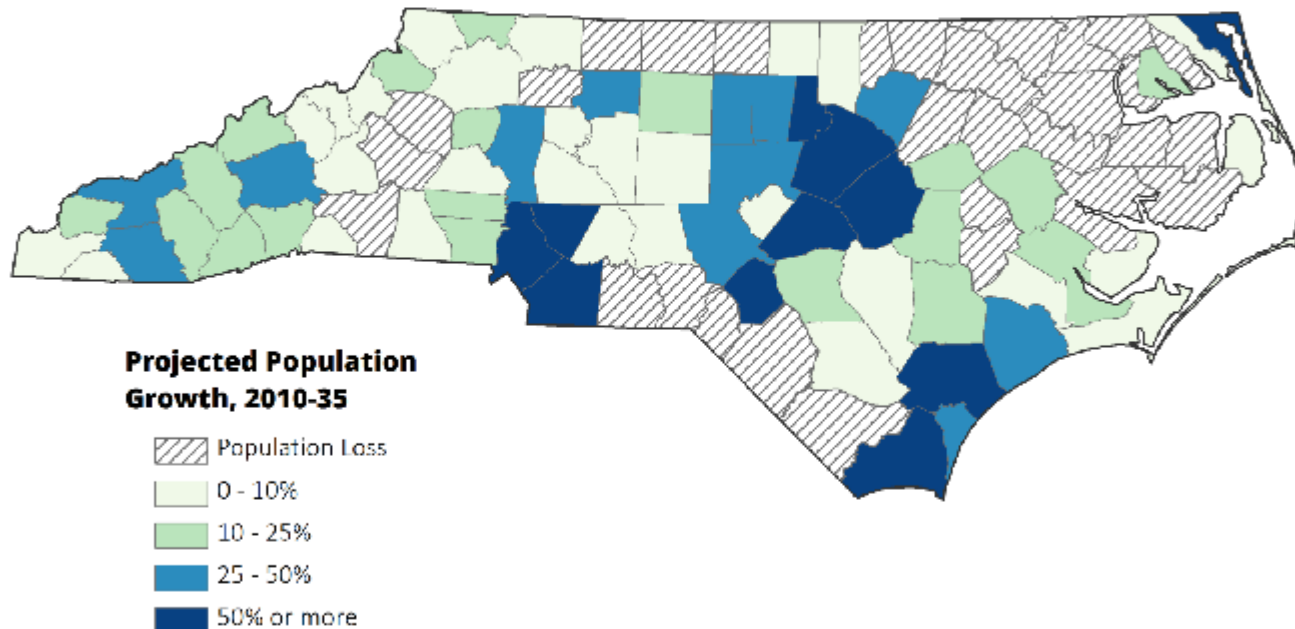
## *2040 Population Growth*



# Population growth will be uneven across North Carolina

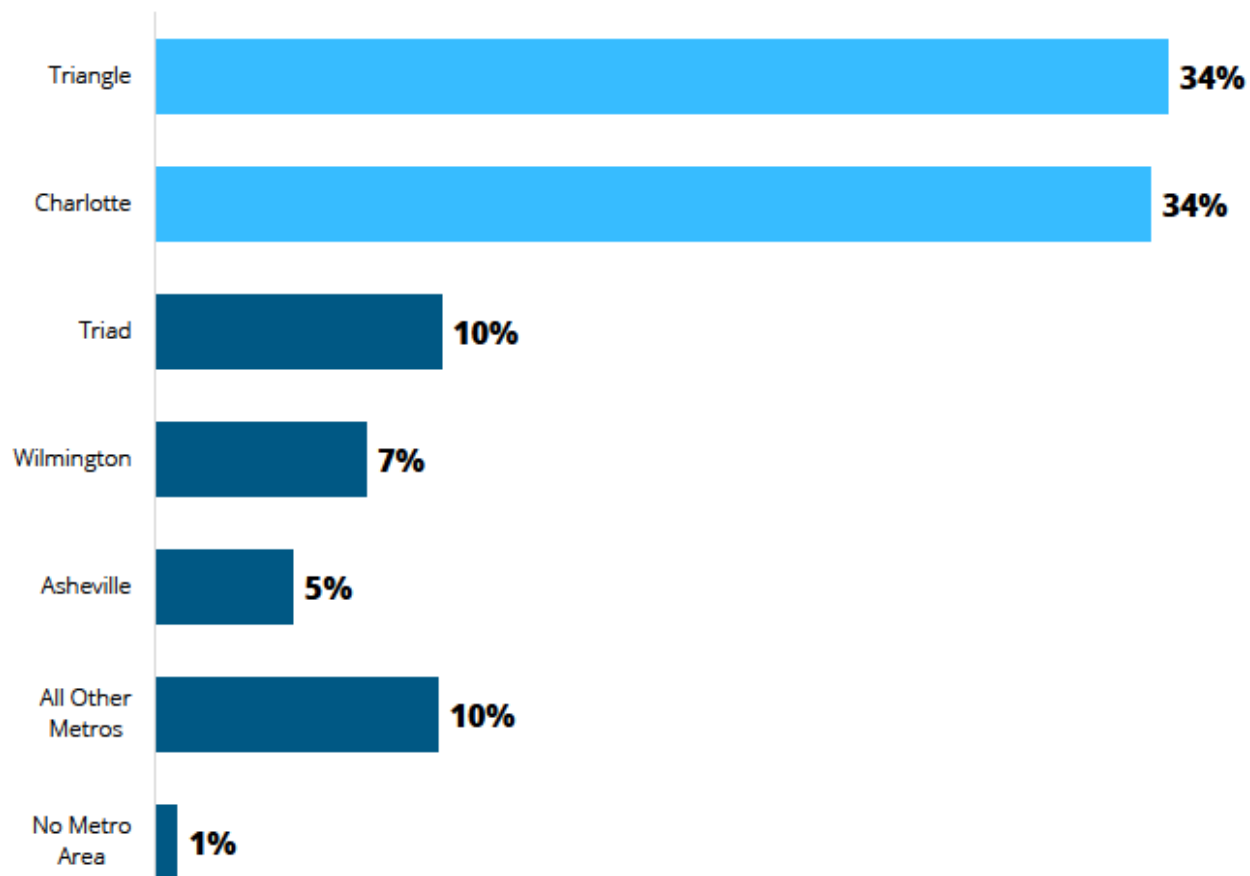
*Projected population growth, 2010-2035*

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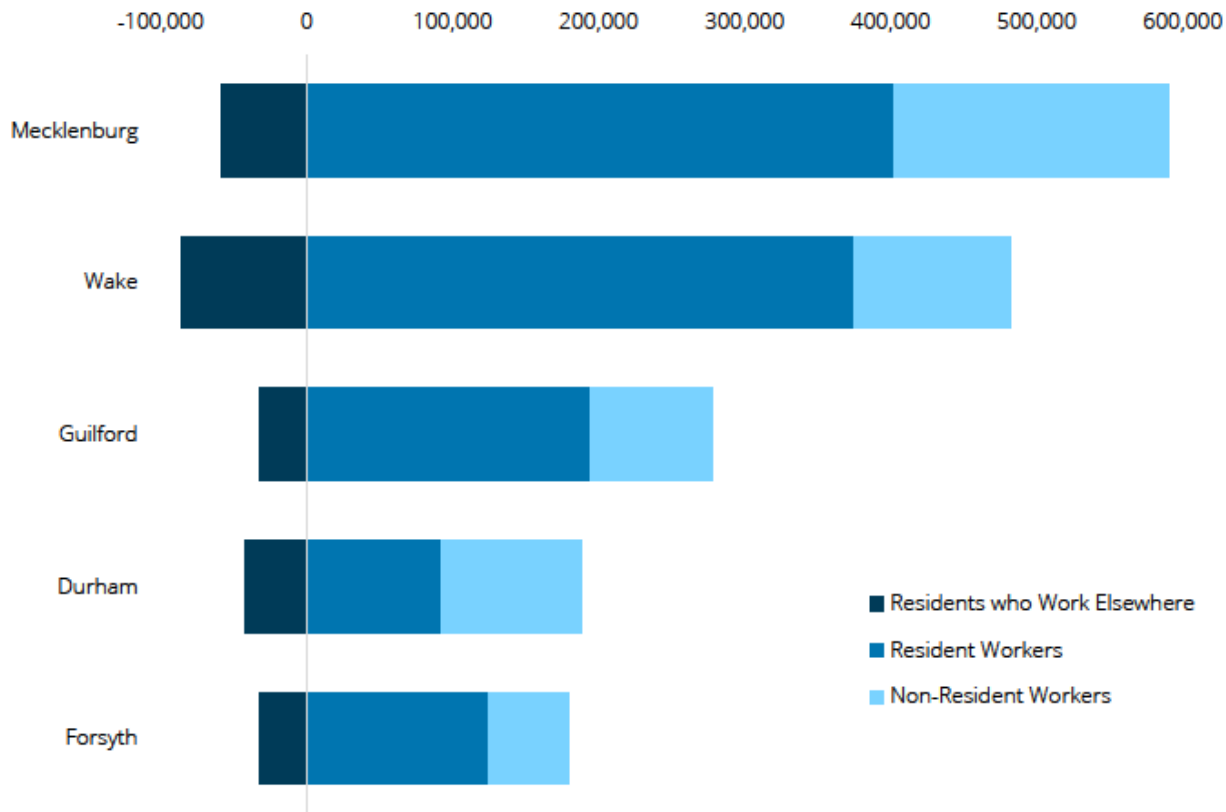
## Two-thirds of NC growth projected to occur in Triangle or Charlotte

*Projected share of 2010-2035 state population growth for select North Carolina metropolitan areas*



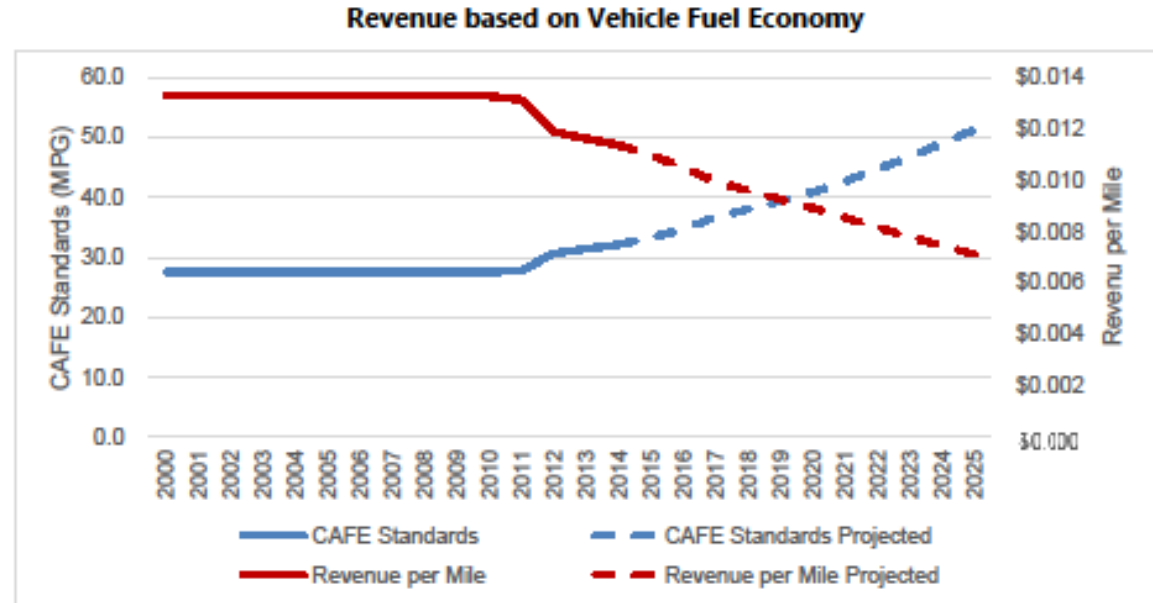
## More than 40% of NC workers work in these 5 counties

*Net commuting patterns, 2009-2013*



## CAFÉ Standards

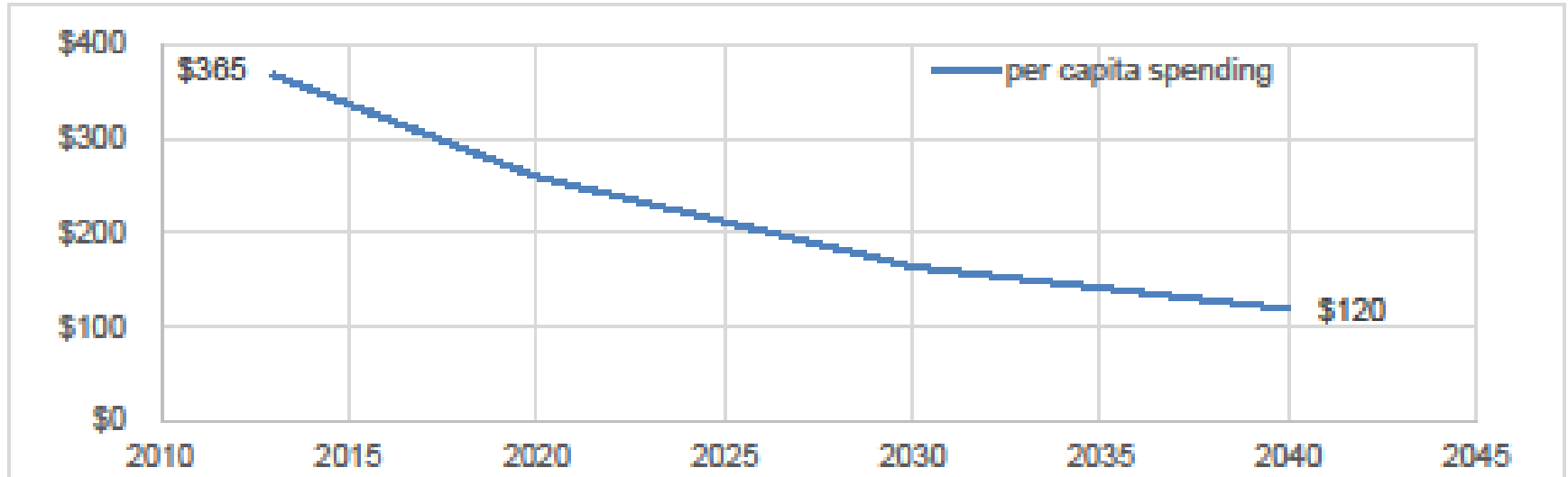
- 2016 – 35.5 mpg
- 2025 – 54.5 mpg



*Source: Derived from Environmental Protection Agency, October 2012.*

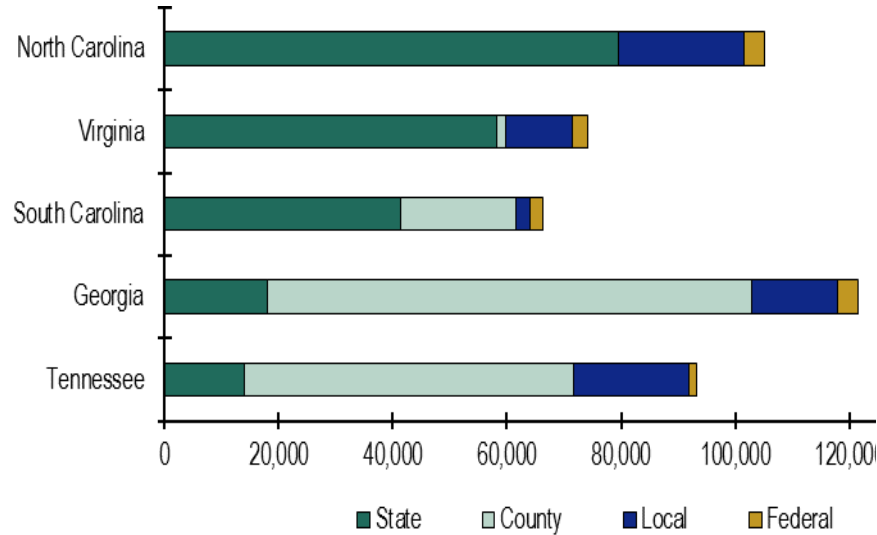


## N.C. Per Capita Transport Infrastructure Spending

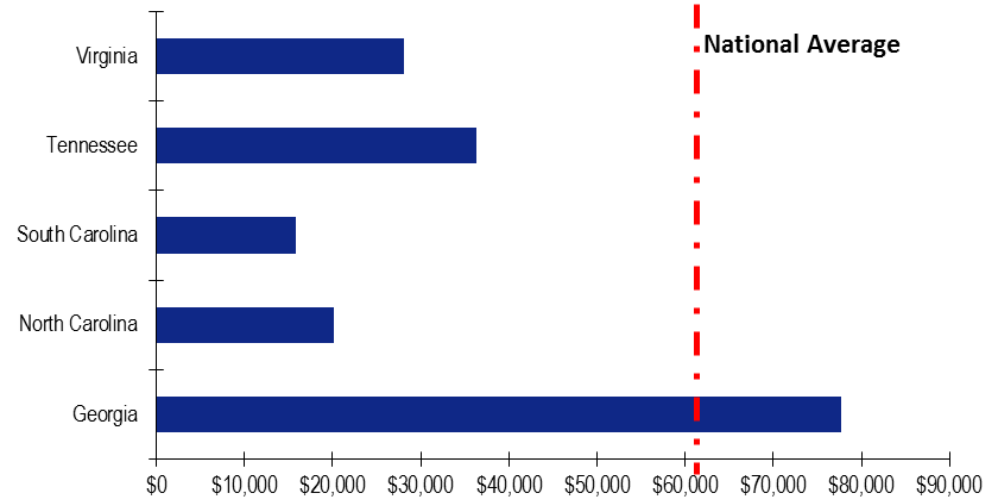


Source: Institute for Transportation Research and Education.

# Mileage of Roads



# State Investment Per Lane-Mile



# Summary of Challenges

- Population growth will increase demand
- Demand growth will not be uniform
- Heavy dependence on existing revenue structures will produce diminishing capabilities in all modes
- System Investment Lags behind the rest of the US

“It is apparent that the change in automotive technology will make the present North Carolina Highway Fund tax base *less* and *less* effective as we turn the page on the 20<sup>th</sup> Century”

Planks, Pavement & Progress

James E Harrington  
Secretary NC Department of  
Transportation 1985-1989

# Long Term Transportation Needs

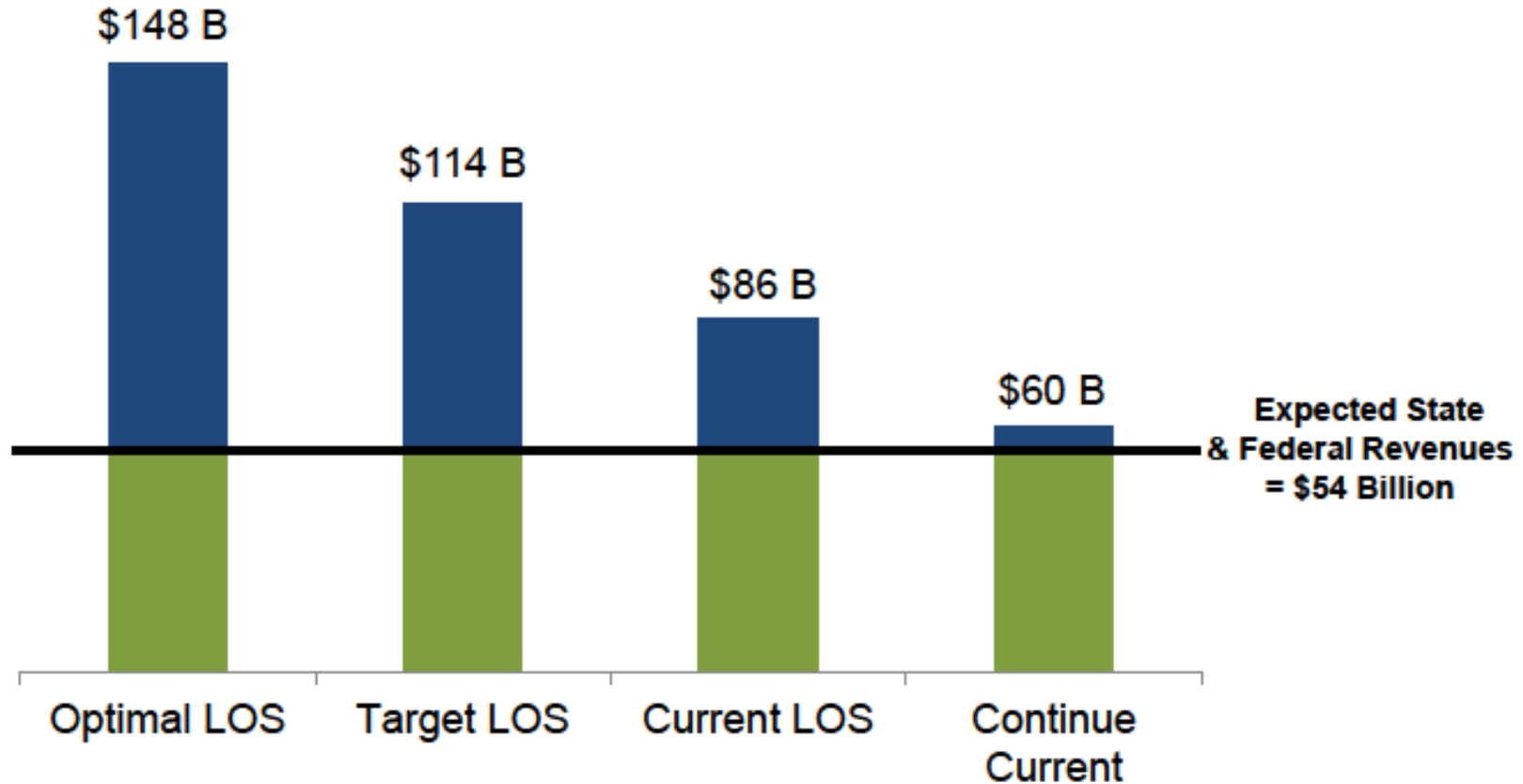
Level of Service Definitions								
Level of Service	General Condition	Highways	Public Transportation	Aviation	Bicycle/ Pedestrian	Ferries	Passenger Rail	Ports*
<b>A EXCELLENT</b>	High quality conditions, very convenient service, widely available	Very smooth roads, minimal congestion	Frequent service and good geographic coverage	No safety issues	Many and varied bike and pedestrian routes	No ferry delays	Good cross-state rail service	No safety issues
<b>B ABOVE AVERAGE</b>	Good quality conditions, convenient service, good availability	Generally smooth roads, some congestion	Good bus service	Some safety issues	Some bike routes	Periodic ferry delays	Decent state rail service	Some safety issues
<b>C AVERAGE</b>	Minimally acceptable conditions, minimally convenient service, moderate availability	More rough roads, potholes & deficient bridges, common congestion	Infrequent service and limited geographic coverage	Many safety issues	Scattered bike routes	Frequent ferry delays	Limited state rail service	Many safety issues
<b>D BELOW AVERAGE</b>	Poor facility conditions, very minimal service, limited availability	Many rough roads, broad congestion	Barebones service	Many safety issues	Few bike routes	Frequent ferry delays	Poor state rail service	Many safety issues
<b>F FAILING</b>	Deteriorated facility conditions, spotty and irregular services, very limited availability	Widespread rough roads, potholes & deficient bridges, widespread congestion	Very restricted service	Widespread safety issues	No bike routes	Regular and long ferry delays	No state rail service	Widespread safety issues

Shaded cells denote current overall modal level of service, as determined by NCDOT as part of its 10-Year Project Prioritization process, based on degree to which modal systems meet defined performance standards.

Shaded cells denote desired overall modal level of service ('Target LOS'), as determined by NCDOT as part of its 10-Year Project Prioritization process, based on degree to which modal systems meet defined performance standards.

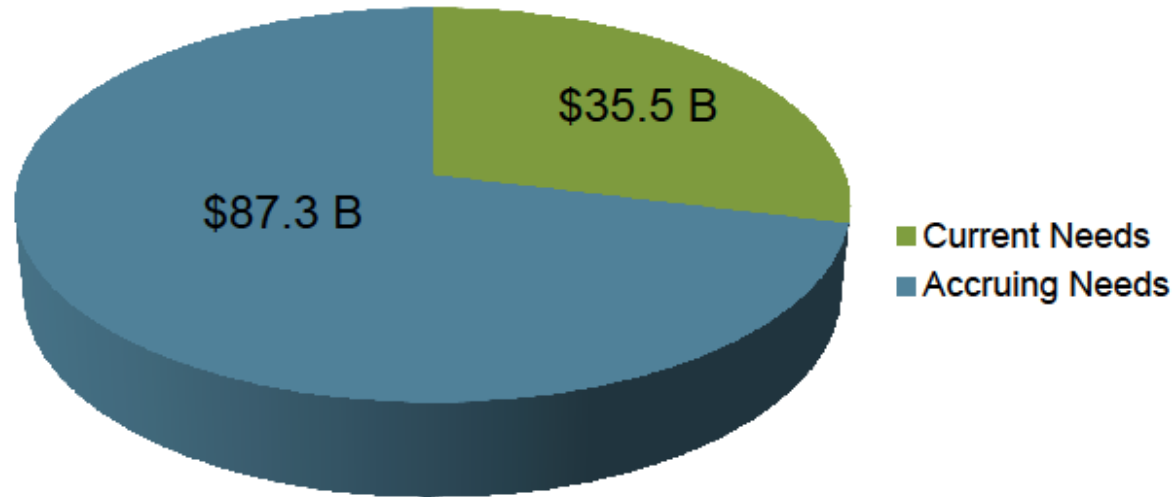
\* Ports came under NCDOT management in 2012, and LOS has not yet been rated.

## NCDOT's 30-Year Needs and Funding Gap:

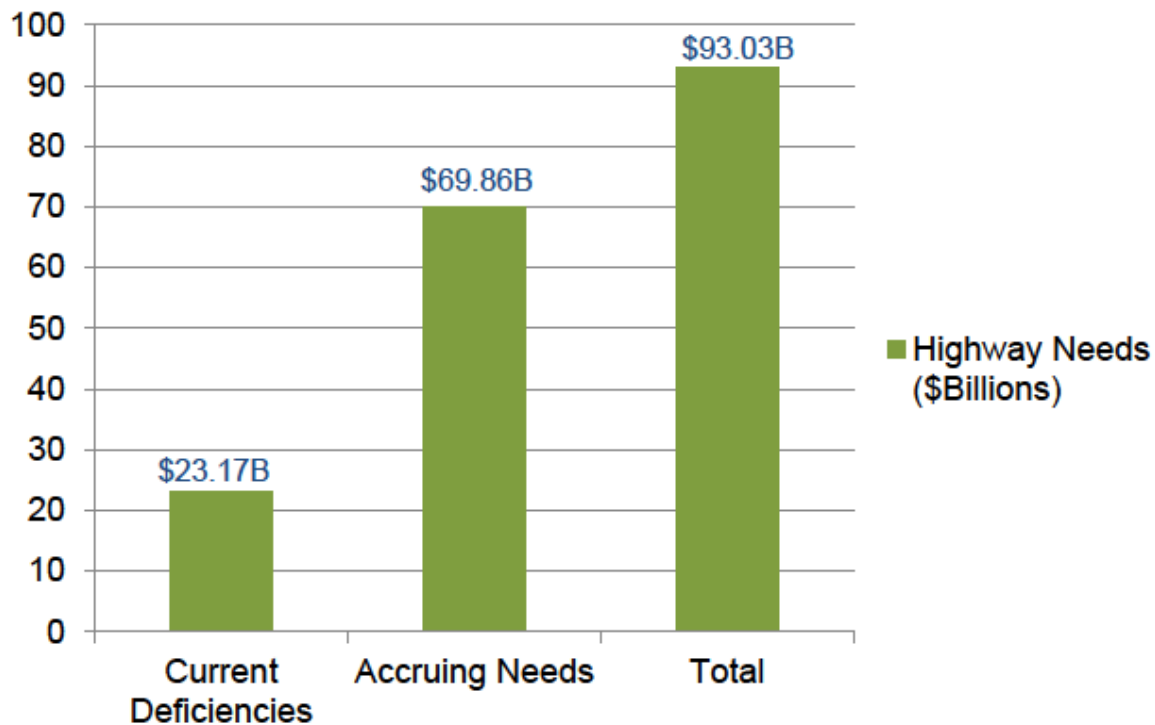


## *2040 Total Investment Needs*

**System Wide Estimated Needs to meet Target:  
\$122.83 B (All Modes)**



## *2040 Multi-Modal Needs: Highways*





## NCDOT's 30-Year Needs and Funding Gap:

### 30-Year Investment Needs by Quality of Service and Mode (in 2011 \$ billions)

Mode	Target LOS	Current LOS	Continue Current Funding Levels
Aviation	2.22	2.08	1.46
Rail	3.54	3.03	1.66
Bicycle/Pedestrian	0.77	0.77	0.34
Public Transportation	20.38	17.34	14.74
Ferries	1.59	1.42	0.71
Ports	1.30	0.97	0.65
Highways	93.03	68.52	46.62
<b>Total Needs</b>	<b>122.83</b>	<b>94.13</b>	<b>66.17</b>
NCDOT Share of Needs	114.11	86.30	59.70
Total Baseline Revenues	54.03		
<b>Funding Gap</b>	<b>60.08</b>	<b>32.27</b>	<b>5.67</b>

Transportation Revenue Enhancement Options in NC (billions of 2011 dollars)		
Revenue Enhancement Options	Estimated Total Revenue until 2040	Assumed Year of Implementation
Continue Motor Fuel Tax Indexing	18.85	Ongoing
Increase Registration/ License Fees with Inflation	6.13	2016
Eliminate Transfers from Highway Fund	4.25	2016
Redirect Short Term Vehicle Lease Fee to NCDOT	0.63	2016
Additional 1% Highway Use Tax- (sales tax on autos)	3.25	2016
Dedicated Local Vehicle Property Tax	0.50	2016
Auto Insurance Surcharge (10% Tax Rate)	12.16	2020
Wholesale Motor Fuels Tax (8%)	12.22	2020
Interstate Tolling (6 cents/ mi Rural, 12 cents/mi Urban, adjusted for 3.5% inflation)	41.93	2020
VMT Fee (2 cents/mi adjusted for inflation)	26.64	2020
<b>Total Revenue Enhancement Options Potential</b>	<b>126.56</b>	

# Why not wait?

### Total Impacts of Infrastructure Spending (Construction and Long-Term)

Level of Service (LOS)	D (Current)	C	B	A
Level of Investment	\$3.5 billion	\$5.7 billion	\$7.0 billion	\$10.0 billion
Jobs	50,050	81,510	100,100	143,000
Employee Compensation	\$36.15 billion	\$58.87 billion	\$72.30 billion	\$103.28 billion
Output	\$38.06 billion	\$61.98 billion	\$76.11 billion	\$108.73 billion

Sources: NCDOT 2040 Plan and IMPLAN modeling Software

**Differential Impacts of Infrastructure Spending (Construction and Long-Term) –  
Difference from Current Level of Investment – based on Annual Investment Scenarios**

Level of Service (LOS)	D (Current)	C	B	A
Level of Investment	N/A	\$2.2 billion	\$3.5	\$6.5 billion
Jobs	N/A	31,460	50,050	92,950
Employee Compensation	N/A	\$22.72 billion	\$36.15 billion	\$67.13 billion
Output	N/A	\$23.92 billion	\$38.06 billion	\$70.67 billion

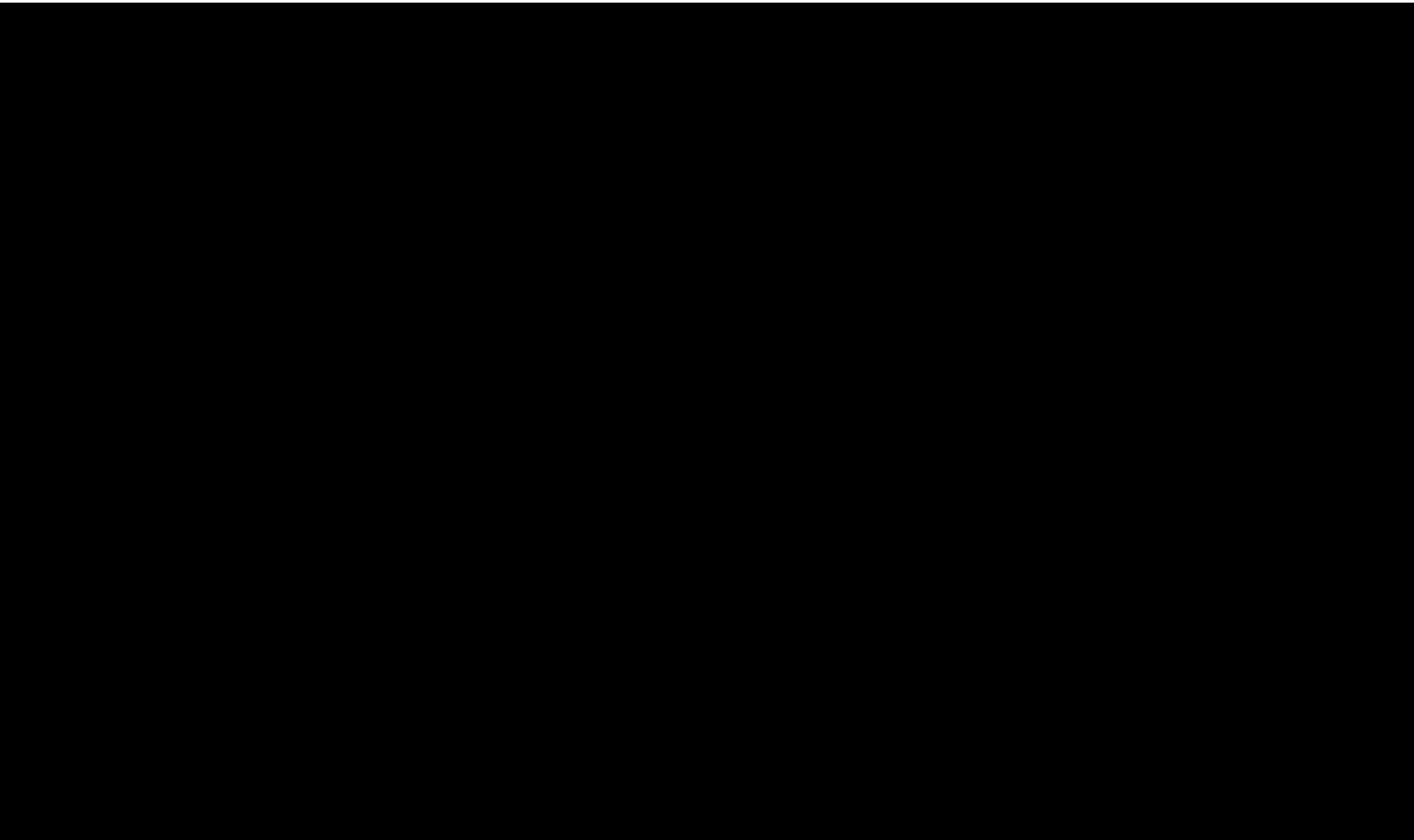
*Sources: NCDOT 2040 Plan and IMPLAN modeling Software*

# Why not wait?...Because change will not wait!

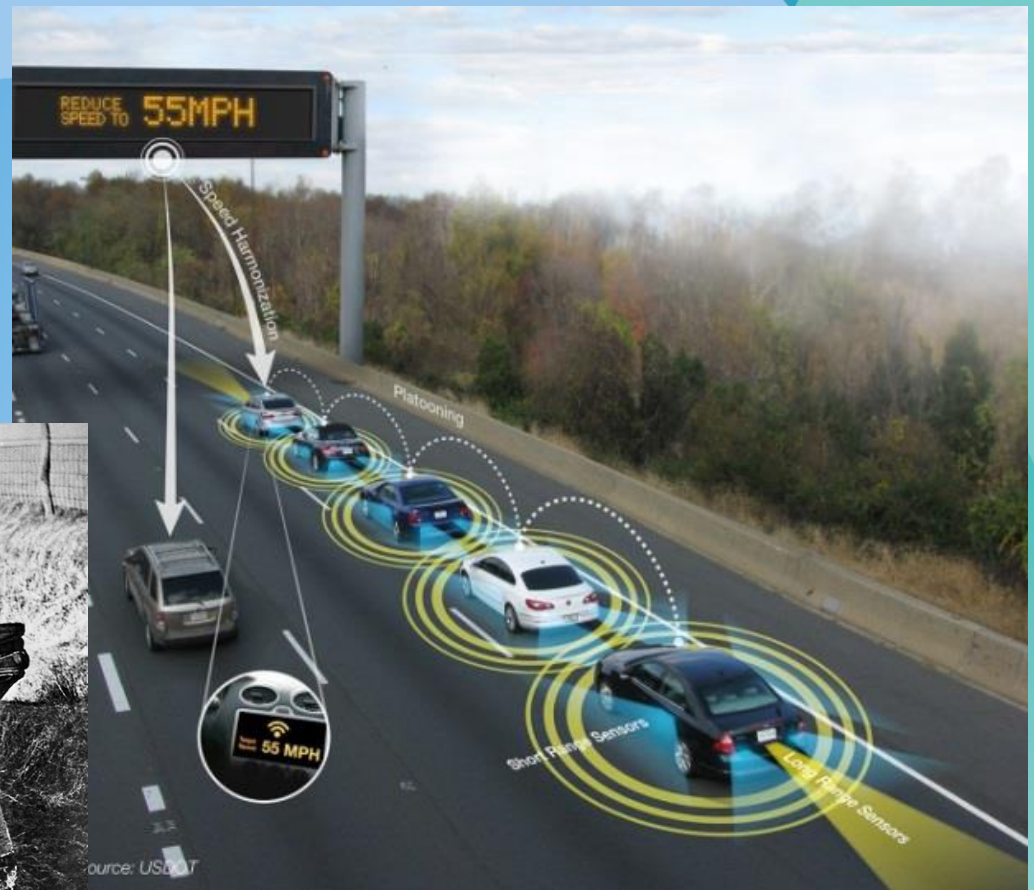
“That highways both follow and bring prosperity to a state or a region is a given...The recognition of the importance of good transportation is one of the key factors in market analysis for new business investment”

Planks, Pavement & Progress

James E. Harrington  
Secretary of Transportation  
1985-1989



1920



2017



# Thank you

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